

RNA Helicase A Antibody

Rabbit mAb Catalog # AP91755

Specification

RNA Helicase A Antibody - Product Information

Application WB, IHC, FC, ICC

Primary Accession
Reactivity
Rat

Clonality Monoclonal

Other Names

DDX 9; DDX9; dhx9; Leukophysin; LKP; NDH2; NDHII; RHA;

Isotype Rabbit IgG
Host Rabbit
Calculated MW 140958 Da

RNA Helicase A Antibody - Additional Information

Dilution WB~~1:1000

IHC~~1:100~500 FC~~1:10~50

ICC~~N/A

Purification Affinity-chromatography

Immunogen A synthesized peptide derived from human

RNA Helicase A

Description Unwinds double-stranded DNA and RNA in

a 3' to 5' direction. Alteration of secondary structure may subsequently influence interactions with proteins or other nucleic acids. Functions as a transcriptional

activator. Component of the CRD-mediated

complex that promotes MYC mRNA

stability.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline ,

pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid

freeze / thaw cycle.

RNA Helicase A Antibody - Protein Information

Name DHX9 (HGNC:2750)

Function

Multifunctional ATP-dependent nucleic acid helicase that unwinds DNA and RNA in a 3' to 5' direction and that plays important roles in many processes, such as DNA replication, transcriptional activation, post-transcriptional RNA regulation, mRNA translation and RNA-mediated gene silencing (PubMed:<a href="http://www.uniprot.org/citations/11416126"



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target=" blank">11416126</a>, PubMed:<a href="http://www.uniprot.org/citations/12711669"
target="blank">12711669</a>, PubMed:<a href="http://www.uniprot.org/citations/15355351"
target="blank">15355351</a>, PubMed:<a href="http://www.uniprot.org/citations/16680162"
target="_blank">16680162</a>, PubMed:<a href="http://www.uniprot.org/citations/17531811"
target=" blank">17531811</a>, PubMed:<a href="http://www.uniprot.org/citations/20669935"
target=" blank">20669935</a>, PubMed:<a href="http://www.uniprot.org/citations/21561811"
target=" blank">21561811</a>, PubMed:<a href="http://www.uniprot.org/citations/24049074"
target="blank">24049074</a>, PubMed:<a href="http://www.uniprot.org/citations/24990949"
target="blank">24990949</a>, PubMed:<a href="http://www.uniprot.org/citations/25062910"
target="_blank">25062910</a>, PubMed:<a href="http://www.uniprot.org/citations/28221134"
target="_blank">28221134</a>, PubMed:<a href="http://www.uniprot.org/citations/9111062"
target="blank">9111062</a>, PubMed:<a href="http://www.uniprot.org/citations/37467750"
target="blank">37467750</a>). Requires a 3'- single-stranded tail as entry site for acid nuclei
unwinding activities as well as the binding and hydrolyzing of any of the four ribo- or
deoxyribo-nucleotide triphosphates (NTPs) (PubMed:<a
href="http://www.uniprot.org/citations/1537828"\ target="\_blank">1537828</a>).\ Unwinds
numerous nucleic acid substrates such as double-stranded (ds) DNA and RNA, DNA:RNA hybrids,
DNA and RNA forks composed of either partially complementary DNA duplexes or DNA:RNA
hybrids, respectively, and also DNA and RNA displacement loops (D- and R-loops), triplex-helical
DNA (H-DNA) structure and DNA and RNA-based G-quadruplexes (PubMed:<a
href="http://www.uniprot.org/citations/20669935" target=" blank">20669935</a>, PubMed:<a
href="http://www.uniprot.org/citations/21561811" target="_blank">21561811</a>, PubMed:<a
href="http://www.uniprot.org/citations/24049074" target="blank">24049074</a>). Binds
dsDNA, single-stranded DNA (ssDNA), dsRNA, ssRNA and poly(A)-containing RNA (PubMed: <a
href="http://www.uniprot.org/citations/10198287" target=" blank">10198287</a>, PubMed:<a
href="http://www.uniprot.org/citations/9111062" target=" blank">9111062</a>). Also binds to
circular dsDNA or dsRNA of either linear and/or circular forms and stimulates the relaxation of
supercoiled DNAs catalyzed by topoisomerase TOP2A (PubMed: <a
href="http://www.uniprot.org/citations/12711669" target=" blank">12711669</a>). Plays a role
in DNA replication at origins of replication and cell cycle progression (PubMed: <a
href="http://www.uniprot.org/citations/24990949" target=" blank">24990949</a>). Plays a role
as a transcriptional coactivator acting as a bridging factor between polymerase II holoenzyme and
transcription factors or cofactors, such as BRCA1, CREBBP, RELA and SMN1 (PubMed: <a
href="http://www.uniprot.org/citations/11038348" target=" blank">11038348</a>, PubMed:<a
href="http://www.uniprot.org/citations/11149922" target=" blank">11149922</a>, PubMed:<a
href="http://www.uniprot.org/citations/11416126" target=" blank">11416126</a>, PubMed:<a
href="http://www.uniprot.org/citations/15355351" target="blank">15355351</a>, PubMed:<a
href="http://www.uniprot.org/citations/28221134" target="_blank">28221134</a>, PubMed:<a
href="http://www.uniprot.org/citations/9323138" target="_blank">9323138</a>, PubMed:<a href="http://www.uniprot.org/citations/9662397" target="_blank">9662397</a>). Binds to the
CDKN2A promoter (PubMed: <a href="http://www.uniprot.org/citations/11038348"
target=" blank">11038348</a>). Plays several roles in post-transcriptional regulation of gene
expression (PubMed:<a href="http://www.uniprot.org/citations/28221134"
target=" blank">28221134</a>, PubMed:<a href="http://www.uniprot.org/citations/28355180"
target="blank">28355180</a>). In cooperation with NUP98, promotes pre-mRNA alternative
splicing activities of a subset of genes (PubMed:<a
href="http://www.uniprot.org/citations/11402034" target="_blank">11402034</a>, PubMed:<a
href="http://www.uniprot.org/citations/16680162" target="blank">16680162</a>, PubMed:<a
href="http://www.uniprot.org/citations/28221134" target="blank">28221134</a>, PubMed:<a
href="http://www.uniprot.org/citations/28355180" target="blank">28355180</a>). As
component of a large PER complex, is involved in the negative regulation of 3' transcriptional
termination of circadian target genes such as PER1 and NR1D1 and the control of the circadian
rhythms (By similarity). Also acts as a nuclear resolvase that is able to bind and neutralize harmful
massive secondary double-stranded RNA structures formed by inverted-repeat Alu retrotransposon
elements that are inserted and transcribed as parts of genes during the process of gene
transposition (PubMed:<a href="http://www.uniprot.org/citations/28355180"
target=" blank">28355180</a>). Involved in the positive regulation of nuclear export of
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constitutive transport element (CTE)-containing unspliced mRNA (PubMed: 10924507, PubMed:11402034, PubMed:9162007). Component of the coding region determinant (CRD)-mediated complex that promotes cytoplasmic MYC mRNA stability (PubMed:19029303). Plays a role in mRNA translation (PubMed:28355180). Positively regulates translation of selected mRNAs through its binding to post-transcriptional control element (PCE) in the 5'-untranslated region (UTR) (PubMed:16680162). Involved with LARP6 in the translation stimulation of type I collagen mRNAs for CO1A1 and CO1A2 through binding of a specific stem-loop structure in their 5'-UTRs (PubMed: 22190748). Stimulates LIN28A- dependent mRNA translation probably by facilitating ribonucleoprotein remodeling during the process of translation (PubMed:21247876). Plays also a role as a small interfering (siRNA)-loading factor involved in the RNA-induced silencing complex (RISC) loading complex (RLC) assembly, and hence functions in the RISC-mediated gene silencing process (PubMed: 17531811). Binds preferentially to short double- stranded RNA, such as those produced during rotavirus intestinal infection (PubMed: 28636595). This interaction may mediate NLRP9 inflammasome activation and trigger inflammatory response, including IL18 release and pyroptosis (PubMed: 28636595). Finally, mediates the attachment of heterogeneous nuclear ribonucleoproteins (hnRNPs) to actin filaments in the nucleus (PubMed: <a href="http://www.uniprot.org/citations/11687588"

Cellular Location

target=" blank">11687588).

Nucleus. Nucleus, nucleoplasm. Nucleus, nucleolus. Cytoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=Nucleoplasmic shuttling protein (PubMed:10198287, PubMed:10207077, PubMed:16375861, PubMed:9162007) Its nuclear import involves the nucleocytoplasmic transport receptor Importin alpha/Importin beta receptor pathway in a Ran-dependent manner (PubMed:16375861). In interphase, localizes in nuclear stress granules and at perichromatin fibrils and in cytoplasmic ribonucleoprotein granules (PubMed:10198287). Colocalizes with WRN and H2AX at centrosomes in a microtubule-dependent manner following DNA damaging agent treatment (PubMed:17498979). Excluded from the mitotic nucleus as early as prophase and re-entered the nucleus at telophase (PubMed:10198287). Recruited in diffuse and discrete intranuclear foci (GLFG-body) in a NUP98-dependent manner (PubMed:28221134). Colocalizes with SP7 in the nucleus (PubMed:17303075). Colocalizes with ACTB at nuclear actin filaments inside the nucleus or at the nuclear pore (PubMed:11687588). Colocalizes with HNRNPC at nuclear ribonucleoprotein complex proteins in the nucleus (PubMed:11687588). Localized in cytoplasmic mRNP granules containing untranslated mRNAs (PubMed:17289661).

RNA Helicase A Antibody - Protocols

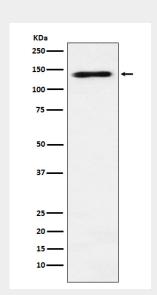
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence



- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

RNA Helicase A Antibody - Images



Western blot analysis of RNA Helicase A expression in Jurkat cell lysate.